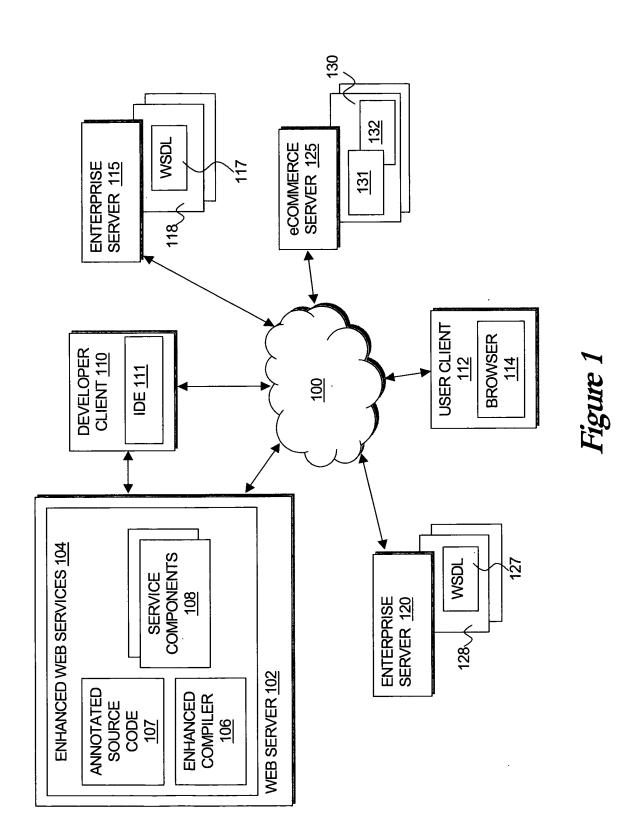
Docket No.: BEAS-01445US1 SRM/DTX Inventor(s): Marvin et al. Appln. No.: Unknown Attorney: Sheldon R. M Appln. No.: Unknown Confirm No: Unknown Filed: Herewith

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201		ItemList items;	// each basket will have its own item list
/* @Operation  * @Conversation Continue */  void addItem(Item i) { }  /* @Operation  * @Conversation Finish */  void checkout(Payment p) { }  /* @Operation  * @Conversation Finish  * @Conversation Finish  ye @Conversation Finish  * World Finish  * World Finish  * World Finish  * World	201 { 206 {	ion t()	creates a
/* @Operation     * @Conversation Finish */     void checkout(Payment p) { }  /* @Operation     * @Conversation Finish     * @Conversation Finish     * @Conversation */     void cancel() { }  /* @Operation */     int activeBaskets() { }  // returns numb	202 { 207 {	<pre>/* @Operation     * @Conversation Continue */     void addItem(Item i) { }</pre>	an existinç associated
/* @Operation  * @Conversation Finish  * @Conversation Finish  * @buffer */  void cancel() { }  // stateless method  int activeBaskets() { }  // returns number of baskets i	203 { 208 {	<pre>/* @Operation     * @Conversation Finish */     void checkout(Payment p) { }</pre>	
/* @Operation */ int activeBaskets() { } // returns number of baskets in	204	rion } (	an exis es the
	205 210-{	Operation */ activeBaskets	f baskets

String lastname) new java.text.SimpleDateFormat("yyyy-MM-dd HH:mm:ss") greeting (String firstname, Calendar.getInstance(TimeZone.getDefault()); " " + lastname sdf.format(cal.getTime()); + firstname + SimpleDateFormat sdf return "Hello" public String Calendar cal

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## Figure 3A

SYSTEMS AND METHODS FOR CREATING NETWORK-BASED SOFTWARE SERVICES USING SOURCE CODE ANNOTATIONS

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Docket No.: BEAS-01445US1 SRM/DTX Inventor(s): Marvin et al.

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```
<m:greeting xmlns:m="http://www.company.com/app/mypackage/CreditReport.</pre>
                                                                                                                                                                                                                                                                                   soap:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"/
                                                                                                                                                                                                                    xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
                                                                                                                                                                                                                                                     xmlns:cgc="http://bea.com/SOAP/conversation"
/app/mypackage/CreditReport.jws HTTP/1.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                           <firstname>Jane</firstname>
                                                              Content-Type: text/xml; charset="utf-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <lastname>Doe</lastname>
                                                                                                                         SOAPAction: "Some-URI"
                              Host: www.company.com
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      </m:greeting>
                                                                                           Content-Length: 648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           </soap:Body>
                                                                                                                                                                                                                                                                                                                                                  </soap:Header>
                                                                                                                                                                                                                                                                                                                                                                                  < soap: Body>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           </soap:Envelope>
                                                                                                                                                                                                                                                                                                                     <soap:Header>
                                                                                                                                                                                          <soap:Envelope
  POST
```

# Figure 3B

```
xmlns:m="http://www.company.com/app/mypackage/CreditReport.jws">
                                                                                                                                                                                                                                                                                                                                                                                                       2001-08-15 16:18:04</result>
                                                                                                                                                                                                  soap:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"/>
                                                                                                                                                               xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
                                                                                                                                                                                                                                                                                                                                                                                                         <re><result>Hello Jane Doe at</ri>
                                    Content-Type: text/xml; charset="utf-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                  </m.greetingResponse>
                                                                                                                                                                                                                                                                                                                             <m:greetingResponse</pre>
                                                                   Content-Length: 574
                                                                                                                                                                                                                                                                    </soap:Header>
                                                                                                                                                                                                                                   <soap:Header>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    soap:Envelope>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     </soap:Body>
HTTP/1.1 200 OK
                                                                                                                                                                                                                                                                                            <soap:Body>
                                                                                                                                 <soap:Envelope
```

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# Figure 3C

SYSTEMS AND METHODS FOR CREATING NETWORK-BASED

SOFTWARE SERVICES USING SOURCE CODE ANNOTATIONS

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```
<c:conversationID>4232-133214-3223132:42332-3144-2332251</c:conversationID>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"</p>
                                 xmlns:c="http://openuri.org/soap/conversation/">
                                                                                                                                                                                       http://original.com/foo/Callbacks.jwi
                                                                                                                                                                                                                            </c:defaultCallbackURL>
                                                                                                                                               <c:defaultCallbackURL>
                                                                                                                                                                                                                                                                                                                                               <!-- contents omitted -->
                                                                                                                                                                                                                                                                    </s:Header>
                                                                  <s:Header>
                                                                                                                                                                                                                                                                                                                                                                                                           </s:Envelope>
                                                                                                                                                                                                                                                                                                                                                                                </s:Body>
                                                                                                                                                                                                                                                                                                           <s:Body>
```

### Figure 4

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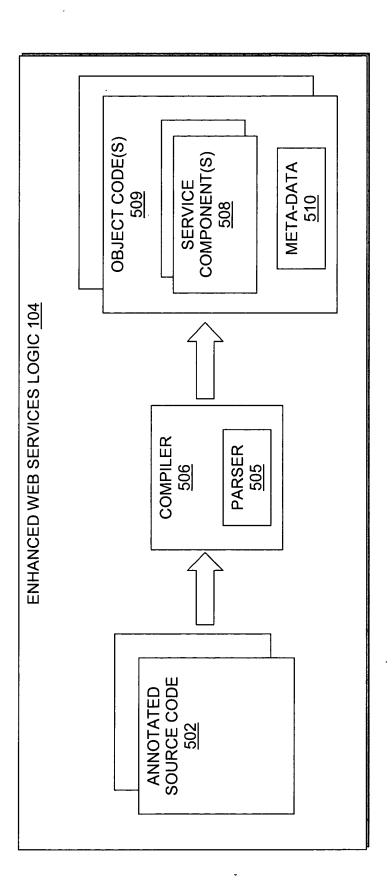


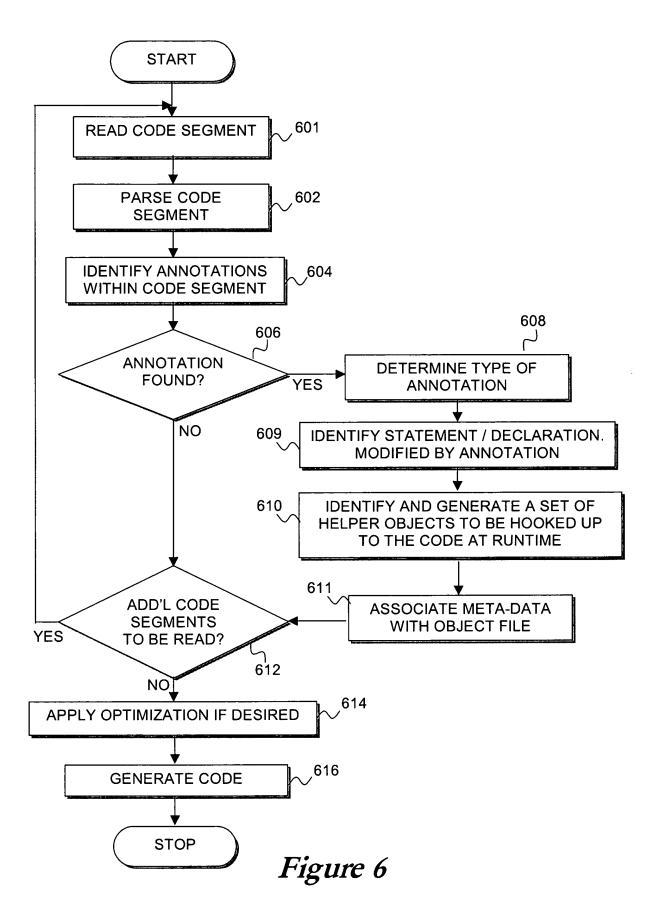
Figure 5

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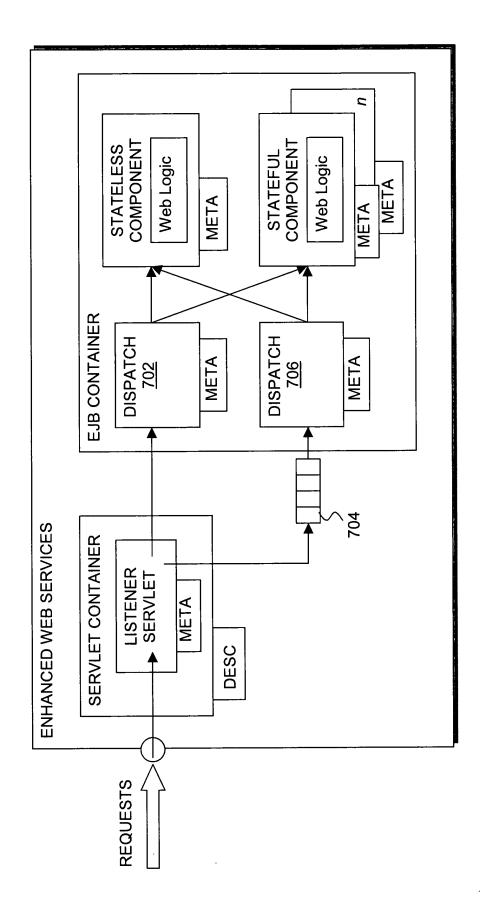


Figure 7

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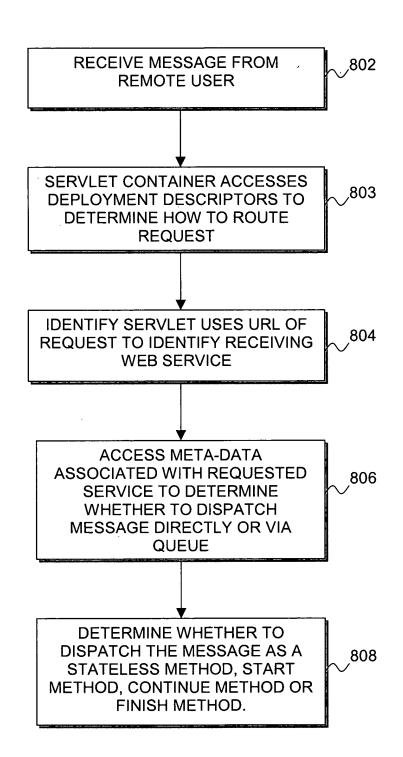


Figure 8

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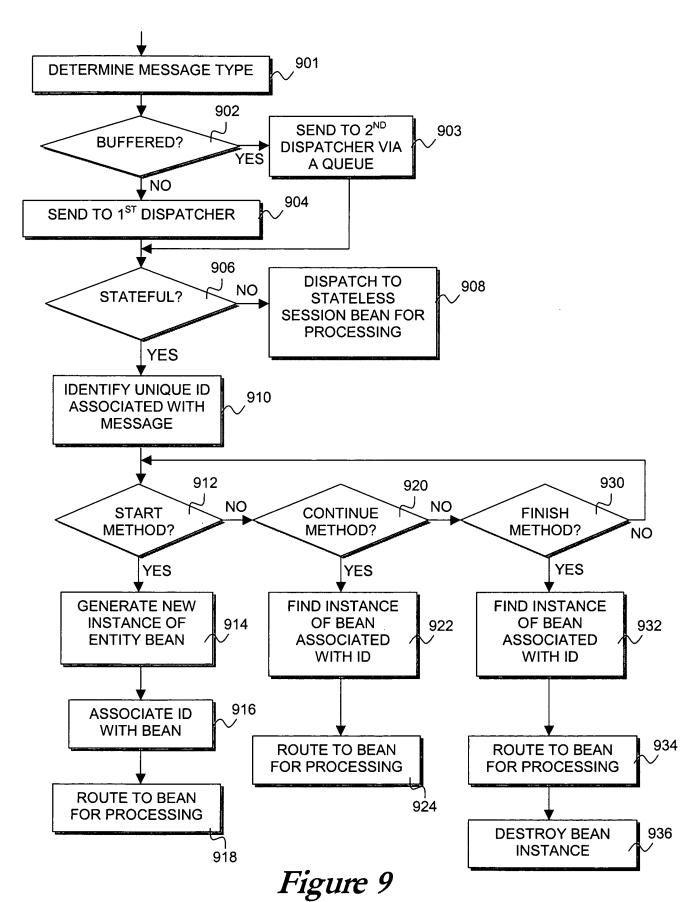
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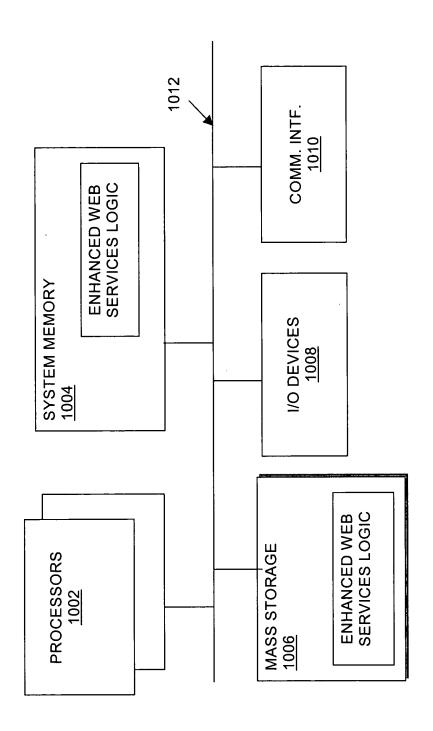


Figure 10

1000

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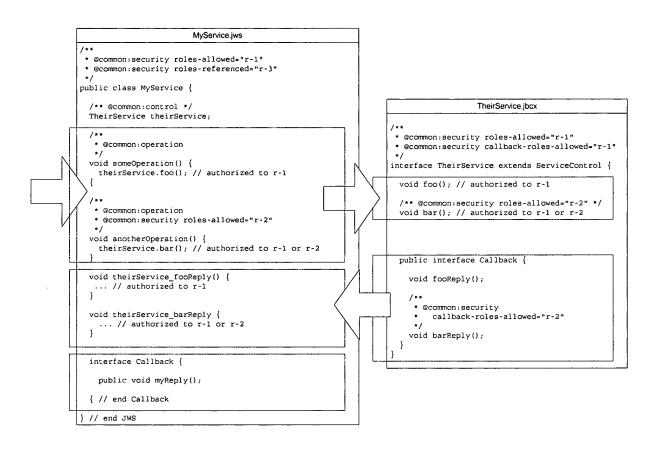


Figure 11

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Using run-as="<start-user>" will cause the Subject that *started* the conversation to be bound to all continue|finish calls *from* the JW(X).

- 1. Invoke privileges on Control operations will be evaluated with respect to the roles granted to the starting Principal
- From within called Controls:
   (a) Any call to getCallerPrincipal() will return the starting Principal
- (b) Any call to hadRole() will be evaluated with respect to the roles granted to the starting Principal

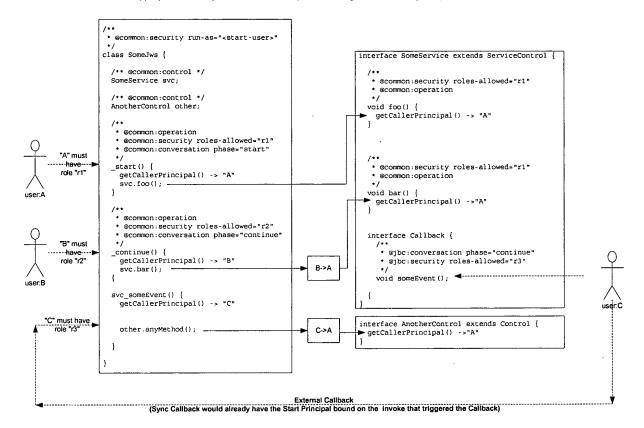


Figure 12

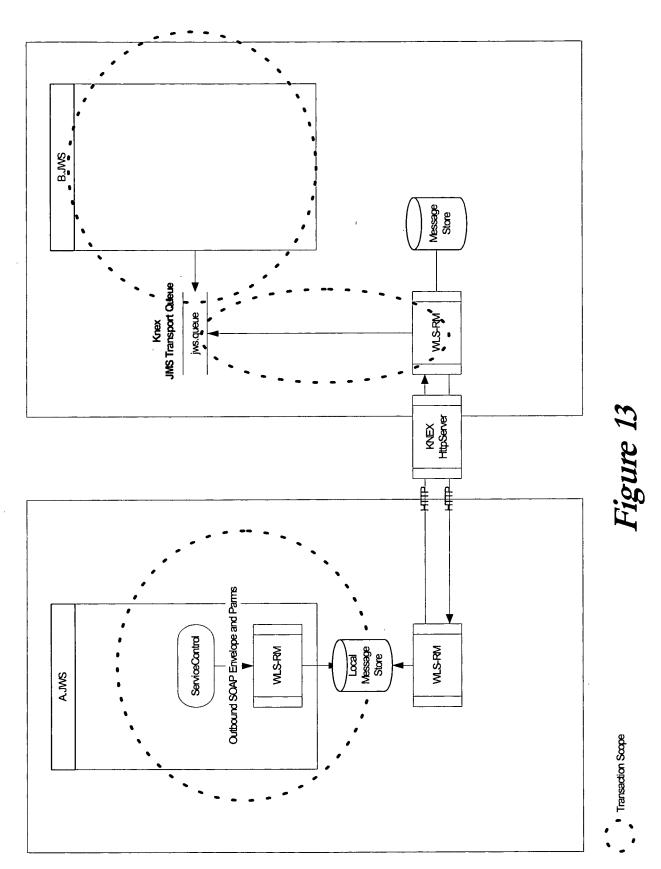
SYSTEMS AND METHODS FOR CREATING NETWORK-BASED Title:

SOFTWARE SERVICES USING SOURCE CODE ANNOTATIONS Docket No.: BEAS-01445US1 SRM/DTX Inventor(s): Marvin et al.

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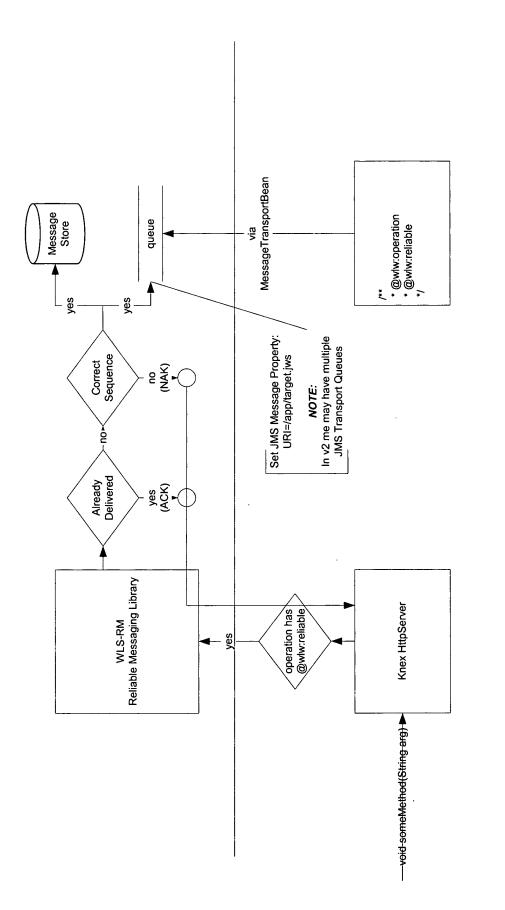
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```
public interface ServiceInterceptor {
   * Provides initialization data to the interceptor implementation. This method
   * will be called before any call to "handle" methods.
   * @param config configuration paramaters defined through config-data annotations
   * @param wsdl the definition for this service
  public void init(Map config, XMLInputStream wsdl);
   * The interface called from the knex runtime to allow top-level
   * containers to interrogate and/or manipulate the incoming XML
   * request. The request respresents the entire payload of the
   * request. This interface is invoked before any paramter-xml
   * maps are run.
   * @param xmlRequest The request that is targeted to an @operation
   * method.
   * @return an XMLInputStream that will be delivered to an @operation
   * method on the current service.
  public XMLInputStream handleRequest(XMLInputStream xmlRequest);
   * The interface called from the knex runtime to allow top-level
   * containers to interrogate and/or manipulate the outgoing XML
   * response. The response respresents the entire payload of the
   * response. This interface is invoked after any return-xml
   * maps have run.
   * @param xmlResponse The response that was generated by an @operation
   * method.
   * @return an InputStream that will be returned to the caller of the
  public XMLInputStream handleResponse(XMLInputStream xmlResponse);
   * The interface called from the knex runtime to allow top-level
   * containers to interrogate and/or manipulate the outgoing XML
   * response. The response respresents the entire payload of the
   * response.
   * @param xmlResponse The response that was generated by an @operation
   * method.
   * @return an InputStream that will be returned to the caller of the
  public XMLInputStream handleFault(XMLInputStream xmlFault);
   * Called when the service instance is being removed. After destroy is called,
   * none of the "handle" methods will be calls.
  public void destroy();
```